

## ABSTRACT

The present invention relates to novel complexes of major histocompatibility complex (MHC) molecules and uses of such complexes. In one aspect, the invention relates to single chain MHC class II complexes that include a class II  $\beta$ 2 chain modification, e.g., deletion of essentially the entire class II  $\beta$ 2 chain. In another aspect, the invention features single chain MHC class II which comprise an immunoglobulin constant chain or fragment. Further provided are polyspecific MHC complexes comprising at least one single chain MHC class II molecule. MHC complexes of the invention are useful for a variety of applications including: 1) in vitro screens for identification and isolation of peptides that modulate activity of selected T cells, including peptides that are T cell receptor antagonists and partial agonists, and 2) methods for suppressing or inducing an immune response in a mammal.